

What is claimed is:

CLAIMS

1. A method for providing a chat interface displayed by a local computer, the chat interface capable of providing haptic messages to other users in a chat session, the method comprising:

causing a display of said chat interface on a display device of said local computer;

receiving input data from a user of said local computer to said chat interface, said input data providing an outgoing chat message, wherein said outgoing chat message includes sent force information;

causing said outgoing chat message to be sent to a remote computer, said remote computer connected to said local host computer via a network, wherein said remote computer outputs a haptic sensation to a user of said remote computer based at least in part on said force information;

receiving an incoming chat message from said remote computer to said chat interface; and

displaying said incoming chat message on a display device to said user of said local computer.

2. A method as recited in claim 1 wherein said remote computer displays a chat interface to said user of said remote computer.

3. A method as recited in claim 1 wherein said remote computer outputs said haptic sensation using a haptic feedback interface device coupled to said remote computer.

4. A method as recited in claim 1 wherein said incoming chat message includes received force information, wherein said local computer outputs a haptic sensation to said user of said local computer, said haptic sensation based at least in part on said received force information.

5. A method as recited in claim 1 wherein said local computer and said remote computer are each coupled to a server machine via said network.

6. A method as recited in claim 4 wherein said chat interface includes a plurality of available haptic effects selectable by said user to be sent as said force information.

7. A method as recited in claim 4 wherein said force information is associated with sound information, such that said remote computer outputs a sound effect in coordination with said output of said haptic sensation.

8. A method as recited in claim 4 wherein said chat interface allows said user to create a custom haptic sensation to be referenced by said force information sent to said remote computer.

9. A method as recited in claim 4 wherein said chat interface includes a plurality of buttons, each of said buttons associated with a particular haptic sensation, wherein said user can send said force information causing a particular haptic sensation by selecting said button associated with said particular haptic sensation.

10. A method as recited in claim 4 wherein said force information is sent only to a subset of a plurality of users in a chat session, said subset of users selected by said user on said local computer.

11. A method as recited in claim 10 wherein a plurality of buttons included in said chat interface include a set of whisper buttons, which send said force information to only said subset of users selected by said user on said local computer.

12. A method as recited in claim 1 wherein said force information includes a command, said command being recognized by a chat interface on said remote computer to instruct said output of a force sensation to said haptic device coupled to said remote computer.

13. A method as recited in claim 1 wherein said force information includes a network address, said address being used by a chat interface on said remote computer as a network location at which to retrieve additional force information required to output a force sensation to said haptic device coupled to said remote computer.

14. A method as recited in claim 13 wherein said network address is an address of a web server storing a library of standard and customized haptic sensations which can be output by said haptic device.

15. A method as recited in claim 13 further comprising uploading custom force information to a server at said network address, wherein said uploaded custom force information can be downloaded by said remote computer to output a haptic sensation based on said custom force information.

16. A method as recited in claim 1 wherein said force information specifies a particular haptic sensation to be output and includes data characterizing said particular haptic sensation.

17. A method as recited in claim 1 wherein said chat interface allows said user of said local computer to type a text command to cause said force information to be sent to said remote computer.

18. A method for providing a chat interface running on a local computer, the chat interface capable of communicating with other client computers in a chat session, the method comprising:

providing said chat interface running on said local computer;

receiving input data from a user of said local computer to said chat interface, said input data providing an outgoing chat message;

causing said outgoing chat message to be sent to a remote computer, said remote computer connected to said local host computer via a network;

receiving an incoming chat message from said remote computer to said chat interface;

outputting said incoming chat message to said user of said local computer; and

outputting a haptic sensation to said user of said local computer using a haptic device coupled to said local computer, said haptic sensation based at least in part on said received chat message received from said remote computer.

19. A method as recited in claim 18 wherein said incoming chat message includes received force information, and wherein said haptic sensation is based at least in part on said received force information, and wherein said outgoing chat message includes sent force information.

20. A method as recited in claim 19 wherein said local computer displays said chat interface on a display device, and wherein said remote computer displays a remote chat interface to a user of said remote computer, wherein said remote computer outputs a haptic sensation to said user of said remote computer based at least in part on said sent force information received from said local computer.

21. A method as recited in claim 20 wherein said remote computer outputs said haptic sensation using a haptic feedback interface device coupled to said remote computer.

22. A method as recited in claim 18 wherein said local computer and said remote computer are each coupled to a server machine via said network.

5 23. A method as recited in claim 18 wherein said incoming chat message includes a network address, said address being recognized by said chat interface running on said local computer as a location at which to retrieve additional force information required to output said haptic sensation to said user of said local computer.

10 24. A method as recited in claim 18 wherein said sent force information specifies a particular haptic sensation to be output and includes data characterizing said particular haptic sensation.

25. A method as recited in claim 22 wherein said server machine includes an Internet Relay Chat (IRC) server, and wherein said chat interface communications with said IRC server using standard IRC protocols.

15 26. A method as recited in claim 18 wherein said incoming chat message is associated with sound information, such that said local computer outputs a sound effect in coordination with said output of said haptic sensation.

20 27. A method as recited in claim 18 wherein said incoming chat message is associated with one or more displayed images, such that said local computer displays said one or more displayed images in coordination with said output of said haptic sensation.

28. A method as recited in claim 23 wherein said network address is an address of a web server storing a library of standard and customized haptic sensations which can be output by said haptic device.

25 29. A method as recited in claim 23 further comprising uploading custom force information to a server at said network address, wherein said uploaded custom force information can be downloaded by said remote computer to output a haptic sensation based on said custom force information.

30 30. A method as recited in claim 18 wherein said chat interface allows said user of said local computer to type a text force command to cause said sent force information to be sent to said remote computer.

31. A method as recited in claim 30 wherein said text force command is displayed in a chat interface of said remote computer and includes at least one delimiter character for indicating the nature of said text force command.

32. A method as recited in claim 30 wherein said text force command is displayed in said chat interface of said remote computer and is includes at least one text character of an emoticon.

33. A method as recited in claim 19 wherein said incoming chat message and said outgoing chat message include data describing text characters for display in said chat interfaces, wherein said sent and received force information is also provided as said data describing text characters.

34. A method as recited in claim 18 wherein said input data and said incoming chat message are provided as audio data causing an audio output.

35. A method as recited in claim 18 wherein said input data and said incoming chat message are provided as text characters displayed by a display device.

36. A method as recited in claim 34 wherein said incoming chat message is provided as a waveform that represents speech of said user of said remote computer.

37. A method as recited in claim 36 wherein said waveform is analyzed by said local computer, said analysis detecting content in said waveform which is associated with said haptic sensation output by said haptic device.

38. A method as recited in claim 37 wherein said content is indicative of one or more emotions in said chat message, and wherein said haptic sensation is associated with said one or more emotions.

39. A computer readable medium storing program instructions to be executed by a local computer to provide a chat interface displayed by said local computer, the chat interface capable of providing haptic messages to other client computers across a computer network, the program instructions performing the following steps:

causing a display of said chat interface on a display device of said local computer;

receiving input data from a user of said local computer to said chat interface, said input data providing an outgoing chat message;

causing said outgoing chat message to be sent to a remote computer, said remote computer connected to said local host computer via said computer network;

receiving an incoming message from said remote computer to said chat interface;

displaying said incoming chat message on a display device to said user of said local computer; and

outputting a haptic sensation to said user of said local computer using a haptic device coupled to said local computer, said haptic sensation based at least in part on said incoming chat message received from said remote computer.

40. A computer readable medium as recited in claim 39 wherein said outgoing chat message includes sent force information and wherein said incoming chat message includes received force information, and wherein said haptic sensation is based at least in part on said received force information received from said remote computer.

41. A computer readable medium as recited in claim 39 wherein said outgoing and incoming chat messages include data describing text characters.

42. A computer readable medium as recited in claim 41 wherein said sent and received force information is provided as text characters.

43. A computer readable medium as recited in claim 39 wherein said received force information is processed by a background application running on said local computer simultaneously with said chat interface, said background application controlling said outputting of said haptic sensation to said user by said haptic device.

44. A computer readable medium as recited in claim 39 wherein said received force information includes a network address, said address being recognized by said chat interface running on said local computer as a location at which to retrieve additional force information required to output said haptic sensation to said user of said local computer.

45. A computer readable medium as recited in claim 44 wherein said program instructions further perform a step of uploading custom force information to a server at said network address, wherein said uploaded custom force information can be downloaded by said remote computer to output a haptic sensation based on said custom force information.